

73, 77-79, 81-83, 86, and 89-96 have to amended to recite "consisting of". No new matter has been added.

Applicants acknowledge the allowance of claims 47,58,59,74,75,84,85,87,88, and 99.

The rejection of claims 70 and 78 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Granata et al. for the reasons of record and the further reasons below is respectfully traversed. The Office further states that Granata et al. expressly disclose a product comprising lactic acid, acetone, 2-butanone, 2,3,-pentanedione, 2-heptanone, 3-hydroxy-2-butanone, diacetyl, acetaldehyde, ethanol, hexanol, trichloromethane, 2-ethyl furan, benzene and dimethyl disulfide falling within the scope of applicants claims and directs attention to page 333-334, Lactic acid Production, Page 335, Table 8, Volatile compound composition. The Office states that "In response applicants to argument that the prior art reference does not teach how to make or use the composition to attract mosquitoes, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. It further states that if the prior art structure is capable of performing the intended use, then it meets the claim. It then states that in a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art and cites *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458,459 (CCPA 1963). The Office then states that with respect to mosquito attracting amounts, the prior art composition contains an amount of the claimed compounds and the specification mentions at the low range of about 1% but that the amounts can

vary based on several factors. It further states that as such, it appears that the prior art composition falls within the broad scope of the limitation "mosquito attracting amounts". It further states that so long as the prior art expressly discloses a single composition containing the claimed compounds, it is immaterial that the prior art also teaches other compositions not having the claimed compounds. The Office then reminded Applicant that in a 102/103 inherency based rejection the Graham V. John Deere factors are not applicable and that Applicant's arguments relative to non-analogous art and obviousness do not appear to overcome the rejection herein.

Applicants respectfully submit that the instantly claimed invention is neither anticipated or rendered obvious by Granata et al. Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. It is not enough, however, that the reference disclose all the claimed elements in isolation. The reference fails to teach a composition that consists of lactic acid and carbon disulfide or lactic acid and dimethyl disulfide. Withdrawal of the instant rejection under 35 USC 102(b) is respectfully requested.

With respect to the rejection under 35 USC 103(a), applicants respectfully submit that the reference fails to teach which compounds in the yogurt could be used to make a composition of the instantly claimed invention. There is no motivation or teachings given that would lead one of ordinary skill in the art at the time the claimed invention was made to pick and choose out of the many types of compounds present in yogurt, to come up with compositions of the claimed invention which consist of lactic acid and butanone or lactic acid and dimethyl disulfide without undue experimentation. No other references have been combined to

cure the deficiency of the Granata et al.. reference. Applicants respectfully submit that the instantly claimed invention is not *prima facie* obvious over Granata et al based on the above remarks. Withdrawal of the instant 35 USC 103(a) rejection is respectfully requested.

The rejection of claims 46, 73, 78, 86, 89, and 91, as it now pertains to newly amended claims 73, 78, 86, 89, and 91, under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over WO98/26661 is respectfully traversed.

The Office states that WO 98/26661 expressly discloses compositions comprising lactic acid and limburger cheese for attracting arthropods, including mosquitos falling within the scope of applicants claims and refers to pages 13, 14 and 19 for evidence. It further states that Limburger cheese contains acetone, 2-pentanone, and dimethyl disulfide citing Seitz et al as evidence of what is in Limburger Cheese.

The Office states that Applicant's argue that the Examiner has not provided a reference which teaches that limburger cheese contains the claimed compounds. The Office then states that the compounds are inherently contained in limburger cheese, nonetheless, the Examiner has provided the extraneous evidence above. The Office then states that the Applicant does not appear to have shown how the other ingredients in Limburger cheese would materially affect the claimed invention. And further, the Office states that the Examiner is not picking and choosing among isolated disclosure. The Office finally states that the prior art expressly disclose a composition and method of attracting mosquitoes comprising lactic acid and limburger cheese where limburger cheese contains acetone, 2-pentanone, and dimethyl disulfide.

Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. It is not enough, however, that the reference disclose all the claimed elements in isolation. The reference fails to teach compositions and methods of using the compositions that consist of lactic acid and 2-pentanone, lactic acid and dimethyl disulfide, or lactic acid and acetone. Withdrawal of the instant rejection under 35 USC 102(b) is respectfully requested.

With respect to the rejection under 35 USC 103(a), applicants respectfully submit that the reference fails to teach which compounds of limburger cheese could be used to make a composition of the instantly claimed invention. There is no motivation or teachings given that would lead one of ordinary skill in the art at the time the claimed invention was made to pick and choose out of the many types of compounds present in limburger cheese, to come up with compositions and methods of use of the claimed invention which consist of lactic acid and 2-pentanone or lactic acid and dimethyl disulfide, or lactic acid and acetone without undue experimentation. No other references have been combined to cure the deficiency of the WO 98/26661 reference. Applicants respectfully submit that the instantly claimed invention is not *prima facie* obvious over WO 98/26661 based on the above remarks. Withdrawal of the instant 35 USC 103(a) rejection is respectfully requested.

The rejection of claims 54, 67, 68, 81, 93, and 94, as it now pertains to newly amended claims 81, 93, and 94, as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Carlson et al. (Yellowfever Mosquitoes: Compounds Related to Lactic Acid that Attract Females) is respectfully traversed. The Office states that Carlson et al. expressly

disclose a method and composition for attracting mosquitoes containing glycolic acid and acetone or pyruvic acid and acetone falling within the scope of the applicant's claims. The Office further states that alternatively, at the very least the claimed invention is rendered obvious within the meaning of 35 USC 103, because the prior art discloses products and uses that contain the same exact ingredients/components as that of the claimed invention and cites *In re May* and *Ex parte Novitski* to support the Office's position.

Applicants submit that the Carlson et al. reference neither anticipates or renders obvious the presently claimed invention. Carlson et al. teach that glycolic acid is applied in acetone to an olfactometer and the acetone is allowed to evaporate. After that 2.5 liters/min of dry nitrogen is passed through the sample tube containing 7.5 ml/min CO<sub>2</sub>. The acetone is no longer present when glycolic or pyruvic acid is tested with CO<sub>2</sub> for attracting activity. Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration. It is not enough, however, that the reference disclose all the claimed elements in isolation. The reference fails to teach a composition consisting of glycolic acid and acetone or methods for using compositions consisting of glycolic acid and acetone or pyruvic acid and acetone. Withdrawal of the instant rejection under 35 USC 102(b) is respectfully requested.

With respect to the 35 USC 103(a) rejection, Applicants respectfully submit that the reference fails to teach any compositions without carbon dioxide. IN fact, the reference teaches that glycolic and pyruvic acid alone, without the CO<sub>2</sub> are not attractive. The reference also states that acetone alone had little attraction. Therefore, the reference fails to teach or

provide motivation to one of ordinary skill in the art to make and use the instantly claimed invention. One of ordinary skill in the art would only use pyruvic acid and glycolic acid with CO<sub>2</sub> and no other compound in the composition which is outside the scope of the instantly claimed invention. No other references are provided which cure the deficiencies of Carlson et al. Carlson et al fails to anticipate and/or render the instantly claimed invention *prima facie* obvious. Withdrawal of the instant rejection is respectfully requested.

The rejection of claims 54-56, 67-69, 77-79, 81,83, 89-98, 100 and 101, as it now applies to newly amended claims 77-79, 81,83, and 89-94, and 96, under 35 USC 103(a) as being unpatentable over Carlson et al. in view of Balfour, Paganessi et al., and Wilson et al. is respectfully traversed. The Office states that Carlson et al. teach that lactic acid is an effective mosquito attractant and that glycolic acid, glycolic acid and acetone, pyruvic acid, and pyruvic acid and acetone when compared with lactic acid are also effective mosquito attractants with reference to page 330, Table 1. and page 331. The Office then states that Balfour teaches the combination of lactic acid and carbon dioxide for attracting mosquitos, Paganessi et al. teach that acetone acts synergistically with carbon dioxide as an attractant for mosquitoes, and Wilson et al. teach that dimethyl disulfide is effective in attracting mosquitos. The Office then states that the difference between the prior art and the claimed invention is that the prior art does not expressly disclose compositions containing glycolic acid and carbon dioxide, lactic acid, acetone and carbon dioxide, and lactic acid and dimethyl disulfide and methods for attracting mosquitoes containing glycolic acid and carbon dioxide; lactic acid and acetone; lactic

acid, acetone, and carbon dioxide; and lactic acid and dimethyl disulfide. It then states however, the prior art amply suggests the same as lactic acid, glycolic acid, acetone, dimethyl disulfide and carbon dioxide are known in the art to attract mosquitoes. It then concludes that it would have been well within the skill of and one of ordinary skill in the art would have been motivated to modify the prior art as above with the expectation that the composition would be effective in attracting mosquitoes and that the claimed invention, as a whole, would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made because every element of the invention has been collectively taught by the claimed teachings of the references.

Applicants respectfully submit that the combination of Carlson et al. taken with Balfour, Paganessi et al., and Wilson et al. fails to render the instantly claimed invention *prima facie* obvious. Carlson et al. teaches that glycolic acid and pyruvic acid alone are not attractive unless CO<sub>2</sub> is present. Table 3 represents chemicals that are tested in the presence of CO<sub>2</sub>. See Page 331, right column, first full paragraph and page 330 under Laboratory Bioassay and Rating System. Furthermore, the reference teaches that the acetone is evaporated off before the testing is performed. Therefore, Carlson et al. fails to teach a composition and method for using that consists of lactic acid and acetone; lactic acid, acetone, and carbon dioxide; lactic acid and dimethyl disulfide; lactic acid, dimethyl disulfide, and carbon dioxide; glycolic acid and acetone; glycolic acid, carbon dioxide, and lactic acid; pyruvic acid and acetone. The Balfour reference simply teaches the use of lactic acid and carbon dioxide which was also taught in Carlson and

fails to cure the deficiencies of Carlson. Paganessi et al. teach that acetone and carbon dioxide greatly increases the number of arthropods attracted to killing stations. It fails to cure the deficiencies of Carlson and Carlson in view of Balfour as stated above. Wilson et al. merely disclose that dimethyl disulfide or di-n-butyl succinate are attractive to mosquitos. Therefore, Paganessi et al., Balfour, and Wilson all fail to cure the deficiencies of the Carlson reference. The combination of references fails to teach or motivate one of ordinary skill in the art at the time the claimed invention was made because the combination of references fail to teach how to modify the Carlson reference in order to practice the instantly claimed invention. Balfour merely teaches the use of lactic acid and Carbon dioxide, Wilson teaches the use of dimethyl disulfide alone, and Paganessi et al teach the use of acetone and carbon dioxide. One of ordinary skill in the art would be motivated to use Lactic acid and carbon dioxide, acetone and carbon dioxide or dimethyl disulfide alone when considering the combination of references. The Office is using the improper standard of hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. IN re Fritch, 23 USPQ2d 1780, 1784 (Fed Cir, 1994). The rejection is improper. Withdrawal of the instant rejection is respectfully requested.

In view of the above amendments and remarks, it is believed that all of the claims are in condition for allowance. Accordingly, it is respectfully requested that the instant

application be allowed to issue. If any issues remain to be resolved, the Examiner is invited to telephone the undersigned at the number below.

In the event this paper is deemed not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for such extension may be charged to Deposit Account 50-2134, along with any additional fees which may be required with respect to this paper.

Respectfully Submitted,

January 22, 2003

DATE

Gail E. Poulos

Gail E. Poulos, Patent Advisor

Registration No. 36,327

USDA-ARS-OTT

5601 Sunnyside Avenue, Rm. 4-1184  
Beltsville, Maryland 20705-5131

Telephone: (301) 504-5302

cc:

R. Brenner  
J. Fado  
U. Bernier  
B. Clary

CERTIFICATE OF FILING VIA FACSIMILE

The undersigned hereby certifies that the attached Amendment with Marked up Version to Show Changes Made were this day January 22, 2003, filed in the United States Patent and Trademark Office via facsimile to facsimile number 703-308-4556 Pages 16

Gail E. Poulos  
Gail E. Poulos

**VERSION WITH MARKINGS TO SHOW CHANGES MADE****IN THE CLAIMS:**

Claims 46, 54, 55, 56, 67, 68, 69, 82, 95, 97, 98, 100, and 101 have been canceled without prejudice or disclaimer.

Claim 70 has been amended as follows:

70. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of lactic acid and butanone.

Claim 73 has been amended as follows:

73. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of lactic acid and 2-pentanone.

Claim 77 has been amended as follows:

77. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of lactic acid, acetone, and carbon dioxide.

Claim 78 has been amended as follows:

78. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of lactic acid and dimethyl disulfide.

Claim 79 has been amended as follows:

79. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.

Claim 81 has been amended as follows:

81. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of glycolic acid and acetone.

Claim 83 has been amended as follows:

83. (Newly amended) A composition consisting (essentially) of mosquito attracting amounts of glycolic acid, carbon dioxide, and

lactic acid.

Claim 86 has been amended as follows:

86. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of lactic acid and 2-pentanone.

Claim 89 has been amended as follows:

89. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of lactic acid and acetone.

Claim 90 has been amended as follows:

90. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of lactic acid, acetone, and carbon dioxide.

Claim 91 has been amended as follows:

91. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of lactic acid and dimethyl disulfide.

Claim 92 has been amended as follows:

92. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of lactic acid, dimethyl disulfide, and carbon dioxide.

Claim 93 has been amended as follows:

93. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of pyruvic acid and acetone.

Claim 94 has been amended as follows:

94. (Newly amended) A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of glycolic acid and acetone.

Claim 96 has been amended as follows:

96. A method for attracting mosquitos comprising exposing an environment with a composition consisting (essentially) of mosquito attracting amounts of glycolic acid, carbon dioxide, and lactic acid.